

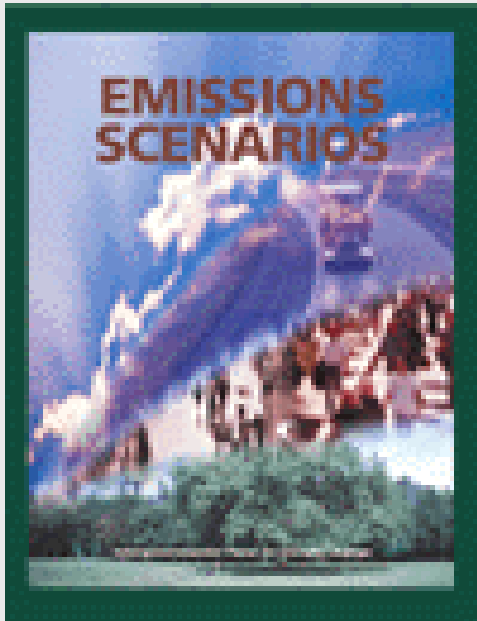
# **Overview of global scenarios and the new climate change scenario process**

Brian O'Neill  
NCAR

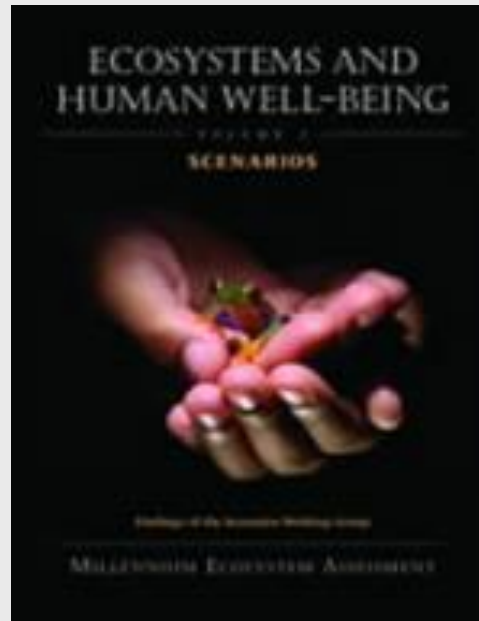
Workshop on Scenarios of U.S. Demographic Change  
Rockville, MD; June 23-24, 2014

# Population in Global Scenario Assessments

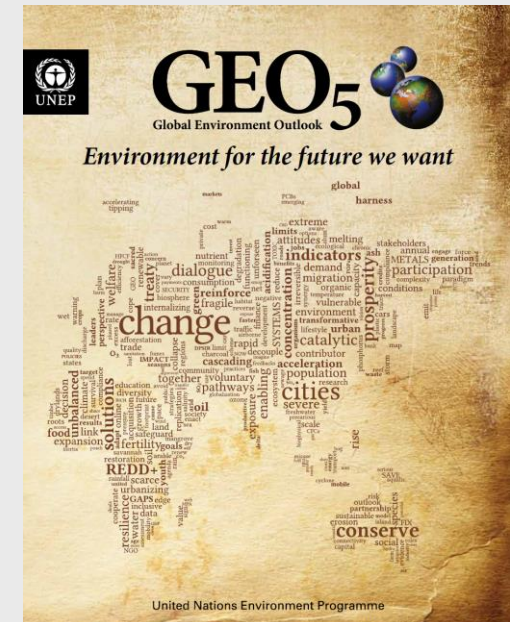
IPCC Special Report  
On Emissions Scenarios



Millennium Ecosystem  
Assessment



UNEP Global  
Environmental Outlook



# The New Scenario Process for Climate Change Research

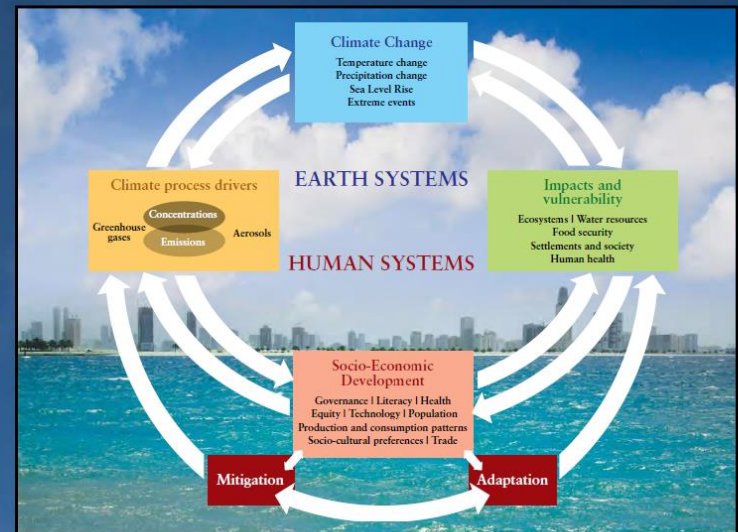
TOWARDS NEW SCENARIOS FOR ANALYSIS OF EMISSIONS, CLIMATE CHANGE, IMPACTS, AND RESPONSE STRATEGIES

## TOWARDS NEW SCENARIOS FOR ANALYSIS OF EMISSIONS, CLIMATE CHANGE, IMPACTS, AND RESPONSE STRATEGIES

IPCC EXPERT MEETING REPORT

19–21 September, 2007

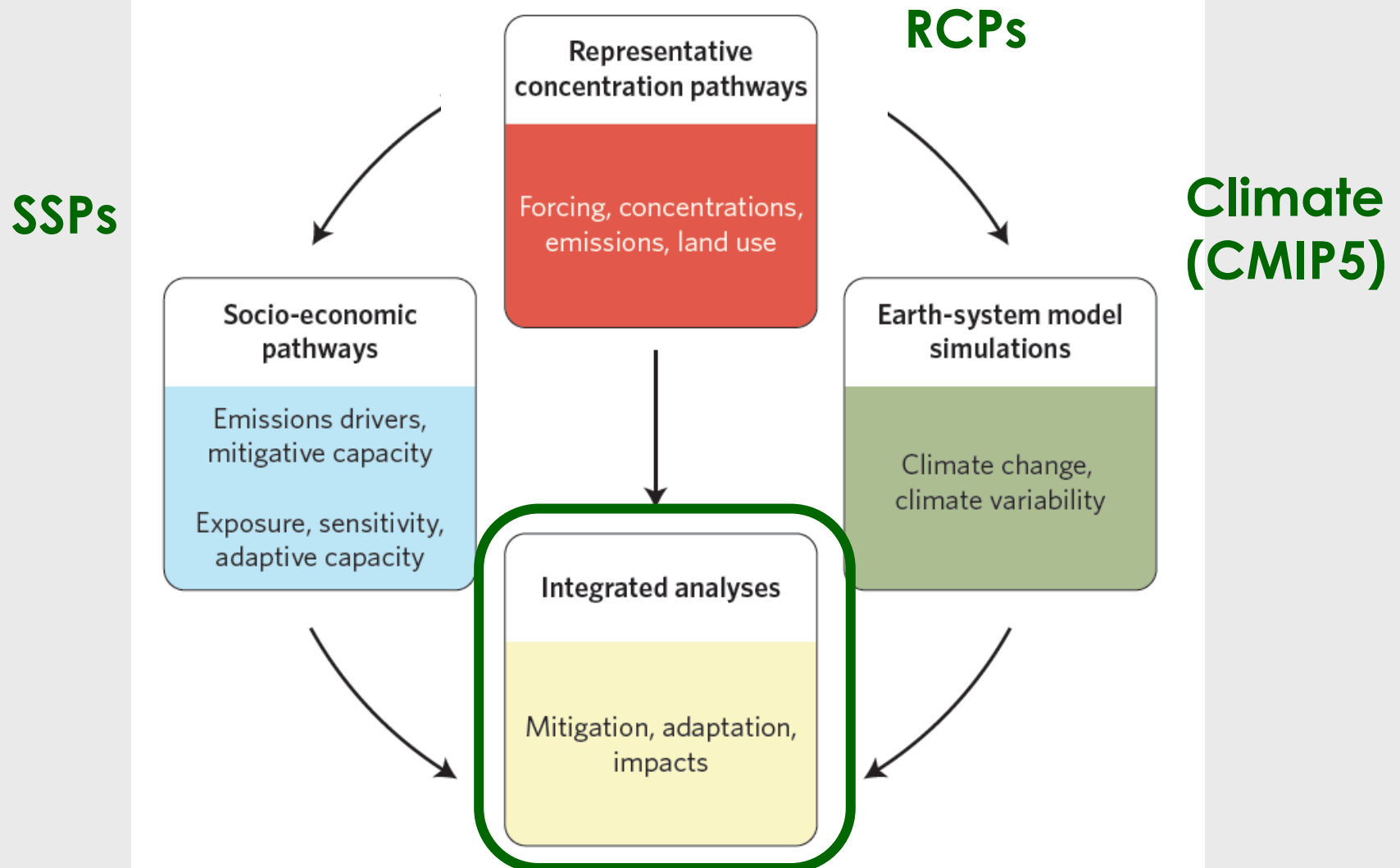
Noordwijkerhout, The Netherlands



Intergovernmental Panel on Climate Change



# The Parallel Process

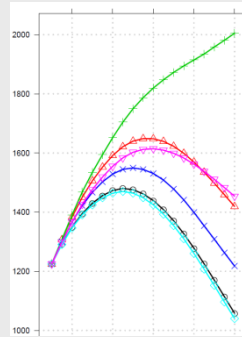


# What's in an SSP



## Narrative

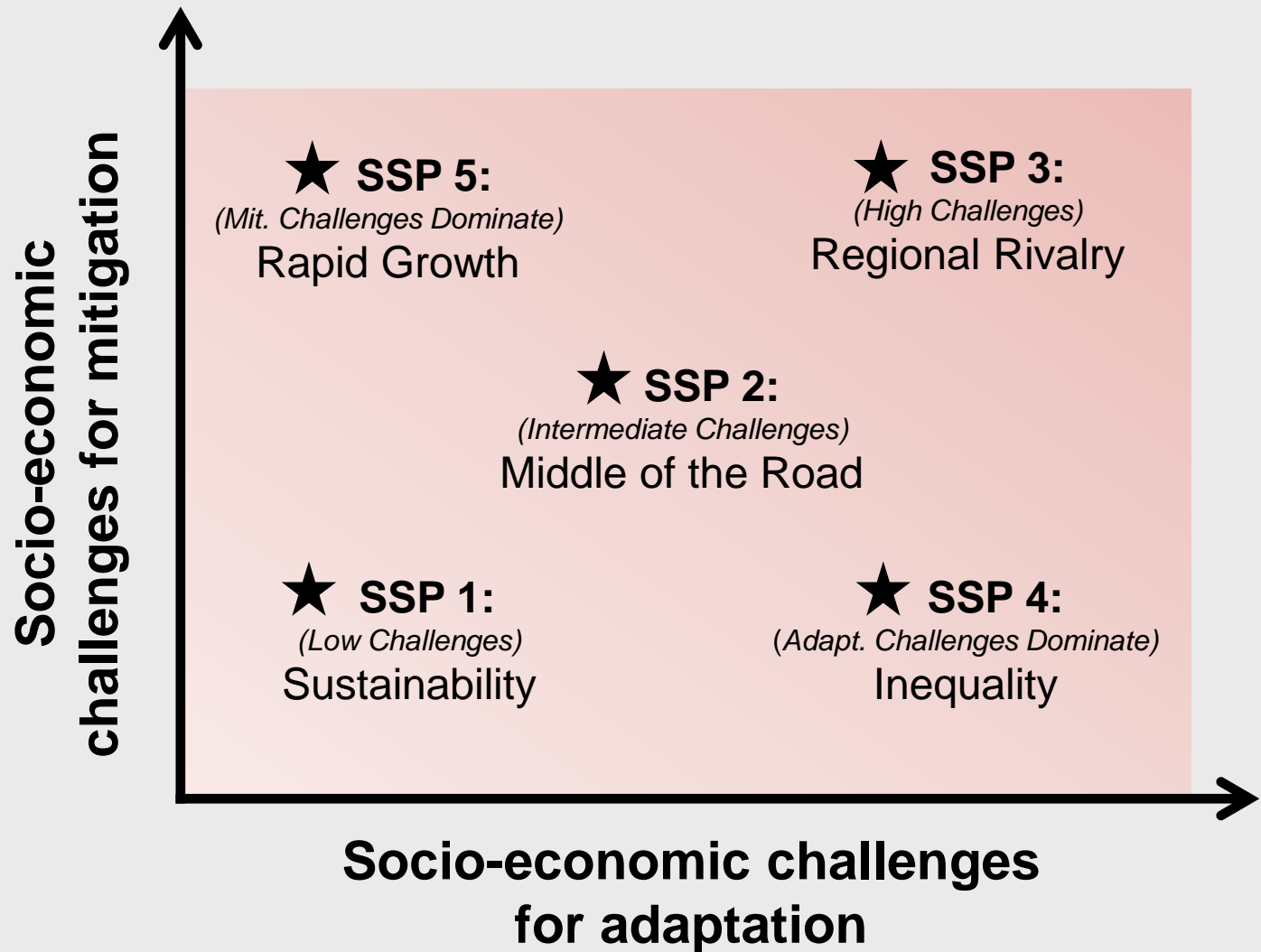
Qualitative description  
of broad patterns of  
development  
Logic relating elements  
of narrative to each  
other



## Quantitative elements

Population  
Education  
Urbanization  
Income  
Spatial population  
Income distribution  
Etc.

# SSP Logic



Relevant range  
of uncertainty  
spanned:  
  
challenges to  
adaptation,  
mitigation

## Mitigation challenges



Baseline(no-policy) emissions  
Mitigation capacity



Population

Carbon Intensity

Agricultural Productivity

Energy Intensity

Energy-related Tech. Change

CCS availability

Urbanization

...

Effectiveness of Policy Institutions

Energy Tech. Transfer

Diet

## Adaptation challenges



Exposure  
Sensitivity  
Adaptive Capacity



Average Wealth

Extreme Poverty

Governance

Water Availability

Innovation Capacity

Coastal Population

Educational Attainment

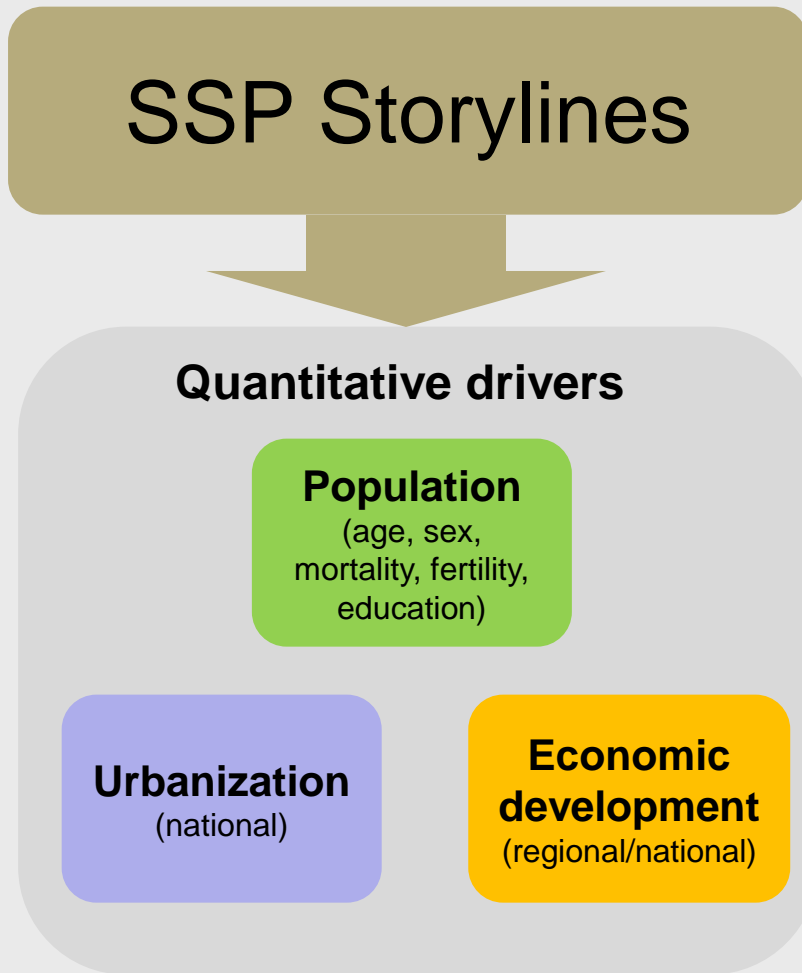
Urbanization

...

Quality of Healthcare

Availability of Insurance

# Projections of key SSP elements



Translation into set of qualitative assumptions

+

Extension of storylines where necessary

+

Alternative models:

Population: IIASA

Urbanization: NCAR

GDP: OECD, PIK, IIASA

+

Various rounds of internal and community review



# Summary of SSP Status

## Conceptual framework established

- Special issue of *Climatic Change* published

## Storylines and projections of key drivers completed

- Special issue of *Global Environmental Change* in progress

